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ABSTRACT

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ISSUES IN TESTING AND THE DESIGN OF COURSES IN PSYCHOLOGICAL ASSESSMENT AND DIAGNOSTICS IN CLINICAL AND COUNSELING PSYCHOLOGY

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Abstract

This paper discusses issues in psychological testing and the design of courses in psychological assessment for students in clinical and counseling psychology. Prior to discussing the teaching of such courses consideration is given to the role of assessment in an overall framework of clinical practice. Following this, topics such as the psychometric characteristics of tests, the utility of the test battery versus the single test, and psychological test interpretation are discussed. An examination of these issues culminates in a two-course assessment sequence which possesses both ecological validity and uniqueness of training approach. This sequence is offered for consideration as a model to others involved in similar training endeavors.

ISSUES IN TESTING AND THE DESIGN OF COURSES IN ASSESSMENT AND DIAGNOSTICS IN CLINICAL AND COUNSELING PSYCHOLOGY

The inclusion of courses in psychological testing, assessment, and diagnostics in university clinical and counseling psychology programs is no longer a routine matter. Whereas twenty or thirty years ago these curricular offerings were considered almost mandatory in professional preparation (APA, 1947), current clinical training philosophies, in their hesitancy to endorse such courses, reflect the controversy which has embroiled this aspect of the functioning of clinical and counseling psychologists (Shemberg & Keeley, 1970).

The reasons for the decline in the teaching of assessment as part of professional preparation are many and have been discussed previously (Holt, 1967; Jones, Note 1). However, a careful reading of such papers reveals that the issue is very much a two-sided one, often with equally valid arguments for the teaching of psychological testing as opposed to to this endeavor. For example, when the controversy is examined along academic versus professional lines it is discovered that questions of reliability and validity are of paramount importance to research clinicians. Practitioners, on the other hand, criticize empirical findings as lacking in rigor and relevance (Ainsworth, 1951; Holt, 1970; Klopfer & Taulbee, 1976)

and point to the utility of psychological tests in applied settings (Blau, 1973). When other points of cleavage in the polemics are examined, similar pros and cons may be discovered.

Perhaps the most important argument in favor of training clinical and counseling psychologists in psychological assessment, however, lies in the demand by employers for these skills at both the doctoral and masters level of training (Dimond, Havens, Rathnow & Colliver, Note 2; Levy & Fox, 1975). Certainly it would be a disservice to students to neglect an aspect of training known to be in demand by future employers; one which will be considered as part of their role-definition and which will consume some thirteen percent of their time. Furthermore, when considering the changing employment market for counseling psychologists, brought on largely by the community mental health movement, it is reasonable that these two university departments cooperate in this endeavor (Noak, Note 3).

Obviously, however, the decision to require psychological assessment as part of professional training in clinical and counseling psychology is not the terminal stage in the resolution of the above controversy. In educating professionals at any level, M.A. or Ph.D., faculty have a responsibility to expose students to professional issues and, where possible, to attempt a reasonable rapproachement of both sides. In fact, this may be more important when educating

individuals who intend to pursue careers in a applied, as opposed to an academic, setting since their everyday functioning and identities may be affected by such issues.

An excellent step toward this rapproachement is the elucidation of the role of assessment in clinical practice and process, and the provision of a place of relevance for such data within an overall philosophy of practice. These frames of reference have been provided by Havens (Note 4). It is the purpose of this paper to further refine the role of psychological assessment in clinical practice by focusing upon major issues in the decision to teach assessment courses. In so doing, several innovative features in course design will be stressed as will a philosophy of assessment practices within a prescriptive framework of treatment, in general, and testing specifically. Hopefully, these may serve as models in the teaching of similar classes.

Considerations in the Design of Psychological Assessment Courses

In light of the issues surrounding psychological testing, briefly alluded to above, the decision to require these skills of all clinical and counseling psychology students must include careful analysis and planning in the development of such classes. This means that, as a minimum, most of the major concerns about psychological testing should be examined and that a resolution, albeit a tentative

one, should be attempted for most conflict areas. In addition, an overall framework for the testing process must be provided in an effort to answer questions of relevance concerning the assessment endeavor. These considerations are discussed more completely below.

The Clinical Process, Prescriptive Intervention, and Assessment

A major question of the relevance of psychological testing and diagnosis to clinical practice is answered when this process is couched in terms of prescriptive intervention strategies and the process of clinical intervention (Dimond & Havens, 1975; Havens & Dimond, 1976). This framework of clinical practice has been discussed previously (Havens, Note 4) as advancing the general philosophy that treatment and intervention strategies surrounding any clinical problem area must be tailored to fit the difficulty at hand. This tailoring, or prescriptive process, cannot be reasonably accomplished without a thorough assessment of a multitude of characteristics relevant to the question being addressed. Consequently, assessment, along with goal-setting, technique selection, and evaluation, are integral to the clinical process.

This view of applied clinical practice serves nicely to locate the psychological testing enterprise as a function to be performed with individuals, as opposed to groups or communities, within routine clinical practice. However, it serves an additional useful, and realistic purpose. This model of clinical practice places psychological

testing within a larger process of assessment in general. In this context, then, psychological testing becomes only one manner by which to gain information concerning whatever client is to be served. This, in turn, greatly expands the purview of courses designed to provide skills in assessment generally, and psychological testing specifically. Furthermore, by viewing testing and assessment within the clinical process as a whole, there is a tendency to focus automatically upon the relationship among test data, goals, and intervention strategies relevant to problem solving in the clinical mode. This focusing, easily overlooked when psychological testing is taught without a framework, adds both relevance and a gestalt quality to the skills being mastered. Finally, by firmly anchoring testing and assessment at a relatively molar level of analysis, other issues of concern, to be discussed below, are also advanced toward resolution.

The Psychometric Characteristics of Psychological Tests

When examining the literature concerning psychological testing and related psychometric characteristics and empirical correlates it is soon discovered that a dichotomy exists. Although most clinical and counseling psychologists routinely use intellectual and perceptual-motor evaluations as part of a total appraisal of personality functioning, most empirical studies of sign-behavior relationships, reliability, and validity in personality assessment focus upon projective techniques, either singly or in some combination (e.g., Golden, 1964; Little &

Schneidman, 1959). Consequently, issues of psychometric characteristics of psychological tests must be evaluated by examining instruments grouped, more or less traditionally, as being intellectual, perceptual-motor, or projective in nature.

In the first category, individual tests of intelligence, research evaluation indicates that instruments such as the WAIS and WISC yield satisfactorily reliable and valid measures of what is known of as intelligence (Anastasi, 1968). To be sure, there is also controversy around the concept of intelligence (McClelland, 1973; Samuda, 1975), but as a guide these instruments appear to be satisfactory in measuring this concept (Matarazzo, 1972), and intelligence, in turn, may reasonably be considered an aspect of total personality functioning.

However, when specific test signs associated with these instruments are examined in relation to specific personality correlates, the evidence leads to less sanquine conclusions (e.g., Guertin, Ladd, Frank, Rabin, & Heister, 1966). Many of Wechsler's (1958) early assertions concerning the use of the WISC and WAIS in the diagnosis of personality and organic conditions appear to be without empirical merit.

A similar situation holds true for the major perceptual-motor test of organic brain damage; the Bender-Gestalt. Empirical studies attempting to use this test to diagnose organicity and/or emotional

problems have been largely negative or equivocal in nature (Anastasi, 1968; Cronbach, 1970). This conclusion seems to follow when considering both adult and child populations.

When psychometric and empirical considerations concerning projective tests as a group are evaluated the controversy becomes a heated one. The great bulk of the empirical investigations conducted have yielded results which are disappointing to clinicians in their general lack of support for interpretive hypotheses. These studies and their general tenor are, presumably, well known and include investigations of the Rorschach (Zubin, 1954), Thematic Apperception Test (Little & Schneidman, 1955), and Draw-A-Person (Swenson, 1957) among others.

Faced with such information as the above, concerning the research base for all major tests routinely used by clinical and counseling psychologists, there is an obvious need for some resolution of this major issue if training in these skills is to continue. Interestingly enough, there are many points of attack concerning this resolution; points which are frequently ignored by critics of psychological testing.

The first of these points involves examining the fact that applied clinical and counseling psychologists are currently expected to perform psychological testing as part of their role in the field. This point has been made previously. However, here it must be combined

with the fact that testing, along with interviewing (diagnostic or therapeutic) account for much of what clinicians and counselors do. If testing is ruled out on empirical grounds, this leaves interviewing to stand alone. In fact, when research studies on the interview are reviewed (Kleinmuntz, 1967) it would be easy to conclude that this technique should also be abandoned. This, of course, would alter the role of the clinician drastically, resulting in primarily behavioral techniques and skills as primary or sole clinical methods. To be sure, there are sympathizers with this position (e.g., Levy, 1974; Ross, 1974).

What is being argued here, however, is that a blind reliance upon empirical research leads to a severe restriction of functioning on the part of practicing psychologists. Just as the interview, in some form, is a necessary clinical tool and not a psychometric instrument, so too, are most psychological test devices useful tools and not tests in a classic sense (Anastasi, 1968). In fact, projective and personality instruments may be most usefully viewed as extensions of the interview providing the diagnostician with standard stimuli from which to infer possible personality tendencies.

Furthermore, given the conceptual framework discussed previously, psychological tests should not be utilized when external, environmental, or behavioral difficulties are primary concerns. Consequently, traditional test devices may best be employed only under conditions

which are most trying for clinical workers, such as in making inferences concerning internal factors, motives, and states of mind.

Judiciously used as tools, then, this would seem to be the most reasonable and conceptually appropriate use of tests and brings up a second point. When the phrase "judiciously used" is inserted into considerations of testing, it is not intended as an empty statement. The statement strongly implies that empirical studies are to be used as guides to interpretation. It means that test interpreters cannot continue to make definite statements concerning personality structure, diagnosis and the like solely on the basis of testing data. It means that testing and other observations must be used in decision-making (Cronbach, 1970) as well as including a heavy dose of good judgment and considerations of type I and type II errors and their consequences. As a concrete example, when organicity is suspected on a Bender-Gestalt and soft neurological signs are also present, no matter the questionable validity of the diagnosis (Anastasi, 1968), a referral for a Reitan examination is most likely in order.

A third point in considering the empirical evidence on psychological tests involves the adequacy of the studies themselves. Certainly, the design of such research is incredibly complex and challenging (Holt, 1970) and much of it is open to criticisms similar to those leveled at investigations of psychotherapy (Meltzoff &

Kornreich, 1970). For example, years ago Ainsworth (1951) objected to the lack of skill of the clinicians used in testing research and the lack of comparison between experimental design and clinical practice. Consequently, many practitioners would argue that there is no good empirical evidence on psychological tests.

This attitude may be too extreme. In fact, a bright side of this controversy may be seen when examining more recent trends in research and, more important, what some thoughtful individuals have managed to cull from the mass of data available to them.

In the area of intelligence testing and diagnosis, for example, there are at least three excellent examples of efforts at integrating experimental and clinical evidence toward more rigorous practice. Two excellent publications, one on the WISC (Glasser & Zimmerman, 1968) and one on the WAIS (Zimmerman & Woo-Sam, 1973), present information on the clinical interpretation of these tools and support or defend these suggestions with both solid rationale and empirical research. In addition, Matarazzo's (1972) revision of Wechsler's original work is a monumental contribution to the clinical usefulness of the intelligence test. This work also considers experimental evidence and integrates this information so as to both support the clinician's use of the tool and further refine interpretive skills.

In the area of personality testing, similar contributions are being made. Ogdon (1975) has reviewed empirical evidence attendant

to such instruments as the TAT, DAP, and Rorschach. The result is a manual of empirically derived and/or tested signs to guide psychological test interpretations. Klopfer and Taulbee (1976) review recent empirical research on several projective measures and conclude that a cautious optimism may now be appropriate. Finally, Goldfried, Stricker and Weiner (1971) in a careful evaluation of Rorschach research draw some positive conclusions as to its use in some situations.

It appears, then, that psychometric characteristics and empirical studies do not, as some would argue, negate the use of psychological testing in clinical practice. In fact, some of the research and opinions mentioned in this section may be helpful in considering the following issue in teaching assessment; the battery versus single test approach.

The Psychological Test Battery Versus The Single Test

As was seen above, most research conducted on psychological tests is characterized by the use of single tests and a sign approach to validity. Notwithstanding the experimental design flaws in this type of research, this approach to test validity does not conform to clinical practice in which many devices and techniques may be used in evaluating the individual client (Megargee, 1966, p. 557).

This means that investigations of testing which conform more closely to actual practice are relevant in considering the method

of teaching assessment courses. When evaluating these studies (e.g. Holsopple & Phelan, 1954) it is found that, despite design weaknesses, (Megargee, 1966), there is some indication that clinicians can use this information in the diagnostic process with some degree of confidence. Data of this sort would suggest that psychological testing may best be taught by emphasizing a battery approach to the process. This philosophy is ecologically valid in its real-world aspects and may be seen to minimize interpretive risks occurring from the administration of only a single test, or using an individual technique of assessment.

However, it is interesting to note that the teaching of a test battery, especially one composed of projective tests alone, is still of minimal use. For one thing, the test batteries of most clinical and counseling psychologists are composed of an intelligence test, such as the WAIS or WISC, and one or more tests of brain damage in addition to standard personality measures. There is little, if any, empirical information on the use of such a complete battery. Additionally, in order for the beginning clinician to maximize the use of data collected in this way, some philosophical and theoretical guidelines are necessary. While there are theoretical positions in dealing with single-test data, overall philosophies relating to battery use are rare.

At least one such comprehensive rationale exists, however, and due to its broad-based empirical and theoretical underpinning it

offers an excellent framework within which to organize data from a battery of tests. This system is the structural approach to testing advanced by Kaplan, Colarelli, Gross, Leventhal, and Siegel (1970) and by Hirt and Kaplan (1967). In this system, psychological tests are viewed as sampling behavior typically thought to be aspects of ego-functioning, such as adaptation, synthesis, defense mechanisms, and various other processes currently subsumed under the heading of cognitive psychological functions. A complete battery of tests, including intelligence and organic measures, is necessary in any comprehensive personality evaluation, then, as the clinical or counseling psychologist is interested in tapping a wide range of ego processes.

The structural approach further refines the use of a battery by organizing tests according to stimulus clarity versus stimulus ambiguity, and goal clarity versus goal ambiguity implicit in each measure. By viewing the testing situation itself as placing demands upon ego-functioning, it follows that the greatest demand is placed upon the subject when neither task goal nor stimuli presented are structured well. Thus, the Rorschach test presents the greatest challenge to the subject as it fits the dimension of stimulus and goal ambiguity. The Wechsler scales and the Bender-Gestalt are at the opposite end of the continuum. Being both structured in stimulus material and goal demands, they require the least in adaptive

functions of the subject in order to respond adequately. The middle range of ego functions are tapped by the DAP, which possesses strong goal clarity, but high stimulus ambiguity, and the ISB and TAT which encompass stimulus clarity with ambiguity of goal direction.

By adopting this approach to psychological testing many benefits are accrued. First, there is the advantage of presenting students with a system which both advocates the battery approach to testing and provides a framework for interpreting data collected. Second, due to the nature of ego theory, concepts from many orientations can be integrated into the overall assessment scheme. For example, behavioral notions, cognitive concepts, and analytic ideas may all be seen as relevant to broadly conceptualized ego processes. In turn, students may be oriented toward assessment techniques appropriate to specific problems and prescriptive intervention and yet still remain within a structural view of the assessment enterprise.

Another major advantage to this view of psychological testing is that it extends interpretive concepts to include the full range, from normality to pathology. When a psychological examiner is cued to look to his or her test data for adaptive features of the ego, it is almost explicit that strengths and not simply deficits will be observed. Furthermore, when dynamic personality functioning is described (which is by no means ruled out in the structural approach) it is a relatively simple matter to encourage students to ask questions

about the relationship between pathology observed and current functioning. When dynamic pathognomic patterns are discovered in a protocol they are not necessarily of diagnostic import until evaluated in light of severity, magnitude, ego structure, and present efforts and success in environmental adaptation. Therefore, by being alert to such considerations it is possible to minimize errors in interpretation and case decision making as well as reducing the well-known tendency of clinicians to search only for pathology in their data (Anastasi, 1968; Taft, 1955).

This brief discussion of the advantages of the structural approach to psychological testing has implications for test interpretation and diagnosis. These implications will be considered below prior to turning to the actual teaching of test skills based upon the approach outlined thus far.

Psychological Test Interpretation and Psychodiagnosis

It would seem that most students of psychological test interpretation are introduced to this process by way of what is known as the sign approach. That is, they are taught that a given sign on a given test may be translated into some corresponding behavior, trait, or tendency in the subject. However, this particular approach to interpretation frequently leads to confusion, especially when students are confronted with discrepant signs within a single battery, which is a fairly frequent occurrence. The parallel to this situation

in research may be exemplified by the confusing results in the area of the assessment of aggression (Davids, 1973).

The philosophy of testing outlined thus far leads logically to a different approach to test interpretation. First, while test signs do possess a relatively important place in the interpretive process, the primary emphasis within the structural approach is on the establishment of a psychological rationale for each test and for subtests within a given measure. The overall rationale is provided first by viewing tests grouped structurally as to ego functions required at each level. Individual signs and subtest rationale follow by considering the contributions of Rappaport, Gill and Schafer (1969), factor analytic studies, and similar information.

It is felt that a thorough comprehension of test rationale is an important step in mastering interpretative skills. When test behavior is viewed as requiring certain adaptive psychological processes, there is a tendency to remain closer to the actual data collected as opposed to leaping directly to sign-related interpretations. This latter approach generally does not include an understanding of the relationship of sign to test behavior and leads to confusion on the part of the test examiner. The former approach, however, is believed to force the interpreter to account for all test behavior that is demonstrated on the protocol. Consequently, there is a need to first describe the subject's behavior in some logical way thus resulting

in a more patient-oriented description than might occur from signs alone.

This method of interpretation is facilitated by a combination of philosophies, all of which are directed toward a comprehensive "test logic." The first philosophy, the structural approach, emphasizes the differences in ego functioning necessary on each measure. With this framework in mind, the test interpreter can view apparently discrepant test behavior as reflecting individual functioning under varying environmental demands and conditions. Thus, as an example, the diagnostic question of the presence of psychosis does not lead to an examination of such signs as the Rorschach F+% alone. Rather, the task of the interpreter is to describe, using a variety of signs and configurations, the conditions under which a given subject may behave in a manner which is generally described by the term psychosis. Additionally, the clinician who uses this system must examine test data in an effort to define the uniqueness of a given subject's experience of, and efforts to cope with, this psychotic process. Needless to say, this type of information is the most valuable for individual case decisions.

Once interpretations of a structural nature are made, the examiner is free to proceed to dynamic considerations of the protocol. A most useful system in this task is a modified version of Campbell and Fiske's (1959) notion of convergent and discriminant validity. Since a complete psychological study of the patient involves

a battery of different tests, it seems reasonable to "cross-validate" a given test sign by looking to an independent measure of the trait in question. In this way the clinical or counseling psychologist can relate findings on one instrument to similar indices on different tools, thus providing some internal consistency and again forcing him or herself into making sense of the data. This leads more heavily toward a configurational study of the subject and toward cautious, strongly supported, statements in the final test report.

An example may clarify this point. Impulsive behavior is one hypothesis which may be entertained when observing a great number of pure C and CF responses on a Rorschach protocol. However, it is obvious that these response scores do not mean that a given subject is impulsive in nature. They simply mean that a reasonable summary of Rorschach responses gathered is that color was used primarily or exclusively in the percepts reported. Rather than reporting "impulsive tendencies," then, the examiner must build and test hypotheses within the battery. Consequently, with this example, hypothesis testing can proceed internally to Rorschach approach indices, experience balance, and affective ratio. However, this process must include examination of other test responses and behavior if one is to be confident of the trait. Therefore, Bender-Gestalt placement, TAT themes, and observations of WAIS test behavior to name just a few "cross-validational" signs must be considered.

Where these other indicators do not support the hypothesis, at least two options are apparent. One is to report the subject's possible impulsivity as occurring under conditions of environmental ambiguity, as described in the structural philosophy. The second alternative is to consider the sign as unsubstantiated and to not report it in the final description of the individual. In either case, the final interpretation using this approach would seem to bear more directly on questions of importance to the referral source and to avoid the types of errors associated with sign interpretation without an appropriate contextual reference.

The role of formal diagnosis in this process is actually minimal. This is the case for several reasons. First, the current diagnostic system (APA, 1968) is known to be notoriously unreliable and of questionable use to the practicing clinician (Millon, 1968). Second, as might be expected, the effort to correlate psychological test findings to diagnostic entities is fraught with pitfalls of a logical and experimental nature (Klopfer & Taulbee, 1976). Finally, there is a discrepancy between the diagnostic process and the role of psychological testing as described above. This discrepancy is most obvious when considering testing as a process of describing unique personality characteristics and functioning, as advocated above, versus the diagnostic process of categorizing a subject within a general nosology. While these two processes are not mutually exclusive, the

emphasis upon diagnostic categorization is certainly the least useful and productive of the two. Consequently, stress must be given to the descriptive aspects of test interpretation.

This does not mean that diagnosis should not be discussed when training individuals in psychological assessment. It does mean that formal diagnosis should be integrated into assessment as the last stage in the process. Furthermore, this must be done in a reasonable manner. For example, the philosophy of interpretation stressed above lends itself well to diagnostic considerations which are broadly conceptualized. Instead of attempting to use tests to diagnose catatonic schizophrenia, a diagnosis of schizophrenia in general may follow most logically from a description of personality functioning. This description, in turn, may be ascertained from test behavior. Thus, diagnostic labelling might best be thought of in terms of broad categories. This is consistent with reliability studies (Schmidt & Fonda, 1956) on the diagnostic system as well as most reasonable considering the overall test philosophy which stresses description first and broad categorization second.

The relationship between psychological testing and psychodiagnosis under the present system includes an additional aspect not usually emphasized with other approaches. Under the current philosophy, prescriptive intervention strategies are an important product of psychological assessment techniques. Therefore, clinicians trained under this system may be taught to "diagnose" in terms of a subject's

ability to deal with environmental factors as well as using dynamics, and from this information to prescribe treatment techniques. This prescriptive approach further broadens current diagnostic categories, provides therapists or counselors with more useful information, and redefines psychological testing as a more useful function than many current conceptions suggest.

A Model For The Teaching Of Psychological Assessment

Although the attempted resolution of the issues surrounding psychological testing is a lengthy and laborious process, once completed the design and teaching of psychological assessment courses is greatly facilitated. This section will deal with the implications of the philosophy derived above for the teaching of assessment and a description of model courses.

Test Philosophy and the Teaching of Psychological Assessment

The overall philosophy of psychological testing presented earlier has many implications for teaching testing skills. Perhaps the most pervasive threads throughout the present approach to testing are an emphasis upon constant integration of data within various concentric models and a strong focus upon the use of a battery of psychological tests. Both of these themes drive a consideration to restructure courses in assessment so as to conform more closely to both philosophy and real-life clinical skills.

The first concern, models of test interpretation, can be handled in a traditional lecture and reading format. An emphasis on integration

of data, however, requires that students be exposed to actual practice in this process. Assessment classes which focus upon discrete tests and their interpretation, a more or less traditional approach, do not readily fit this model. Therefore, it is necessary to expose students as quickly as possible to dealing with information from a complete battery of tests in order to be philosophically, and clinically, consistent and relevant. What this means in practice is a shift from courses in administration and interpretation to one class emphasizing administration of a battery of tests with a follow-up course focusing upon interpretation of all instruments involved.

A second issue involves the selection of a representative test battery to present to students. As a guide, reports of the tests currently used most often in clinical settings may be utilized (Lubin, Wallace, & Paine, 1971). An additional refinement of this process includes data from a survey of Illinois agencies which currently employ Master-level students within the state. This survey indicates that, similar to national trends, an ideal battery of tests would include the WAIS, WISC, and Stanford-Binet as measures of intelligence. The Bender-Gestalt, TAT, DAP and Rorschach complete the agencies' suggested test skills. To this basic battery the incomplete sentences could be added while the MMPI, another highly ranked instrument, could be taught separately within a course on objective testing.

Consideration of these issues, then, results in a basic two-course sequence in psychological testing. Prior to beginning the sequence, students are assumed to have a knowledge of psychopathology and personality theory and to have completed a course in tests and measurement and basic statistics. The two course skills training sequence is discussed below.

Theory and Techniques of Individual Assessment

The goals of this first course in psychological testing are limited to a philosophical orientation to the testing process and acquisition of skills in administration and scoring of each test in the battery mentioned above. These goals are accomplished in a variety of ways including lecture, reading, and practice.

The overall philosophy and orientation to assessment is given quickly through the lecture process. The role of assessment in the clinical process is explained as is the broad scope of assessment practices in general and it is emphasized that these skills include more than simply psychological testing. From this beginning the battery is introduced and the relationship among tests is discussed in a logical and coherent manner. Reading assignments paralleling this discussion are assigned and include some history and a focus on issues (Holt, 1967; Kaplan, Hirt, & Kurtz, 1967), as well as a review of the structural approach to testing (Hirt & Kaplan, 1967).

Skill acquisition is accomplished through a variety of methods including readings associated with each test presented. The Wechsler

manuals (Wechsler 1949; 1955; 1974), Bender's (1938) monograph, the TAT manual (Murray, 1943), and two Rorschach texts (Beck, Beck, Levitt, & Molish, 1961; Levitt, 1974) make up the bulk of the reading. Practice with each tool is, of course, the essence of skill acquisition and this is structured so as to provide both in-class observation and out-of-class administration and scoring. Additionally, students are provided pre-administered protocols to score in an effort to increase comparisons among students abilities.

Each test is presented sequentially across the semester, but with differential emphasis. Thus, the WAIS, WISC, and Rorschach are most heavily emphasized. At the semester's completion, however, two complete batteries are required to be administered, scored, and summarized. This includes standard procedures with intelligence measures and the Rorschach, thematic summaries from the TAT, and ISB, and Bender-Gestalt signs.

Psychological Test Interpretation

The second course in the sequence assumes that students can administer and score the basic test battery, and have some knowledge of the role of testing in both assessment and the clinical process. The goal of this class is to familiarize students with interpretation of individual instruments, integration of data from the battery and coherent report-writing. These basic skills permit refinement and practice during internship and/or practicum experiences.

The reading in this class is designed to serve several purposes. The first is to impart basic information on clinical test interpretation and is provided by reading Ogdon's (1975) handbook and selections from Anderson and Anderson (1951), an older, but excellent resource on test interpretation. Other articles by Waite (1961) and Rosenwald (1968) supplement this information. Research using these instruments is summarized nicely by Kleinmuntz (1967) and in articles in various editions of the Annual Review of Psychology, including Klopfer and Taulbee's (1976) excellent review. Two articles on test report writing (Applebaum, 1970; Bachrach, 1974) are included to orient students toward this aspect of testing. Finally, selective chapters from Palmer (1970) help to familiarize students with assessment techniques with children and also are used to remind them of the broad-based notion of assessment, including behavioral measures and observations.

The actual skill in test interpretation is mastered through a case study format developed after noting Holt's (1967) comments concerning the decline in the interpretive skills of clinicians. It is Holt's contention that there is a great deal of difference between studying interpretive processes from a textbook and doing so from a master. Consequently, a realistic compromise is reached by presenting students with test data reproduced in a variety of textbooks written by masters of the testing process. Small group interpretations are presented to the class and compared with the textbook

interpretation as a criterion. This process is continued test by test and culminates in the interpretation of batteries presented in Schafer (1948) or those collected by the instructor. In this way feedback is given quickly and completely and some modeling and criterion is available to help students modify their skills toward a given end.

Conclusions

The philosophy of testing and model for teaching assessment presented in this paper are felt to be a reasonable approaches to a currently controversial issue in clinical and counseling psychology. Since the primary focus throughout this paper is the training of the applied clinician, the model is useful in its organization and efforts at integration. Instead of ignoring research, for example, an effort is made here to account for it and blend it with clinical practice, and yet to maintain the integrity of the assessment process. To be certain, the philosophy and model have flaws. However, the benefits of training within this system would seem to outweigh its weaknesses.

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